

YOUR HEALTH

IN

AIR COMMAND

SOUTH EAST

ASIA

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Principal Medical Officer,

H.Q. Air Command, S.E. Asia.

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AIR COMMAND, SOUTH EAST ASIA.

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It is possible that you have not experienced life "East of Suez" using the words of Kipling. There have been numbers of books of science and of fiction written upon the subject. Life in the East is neither glamorous nor sordid. It is simply a new and often fascinating mixture of ways of living. The great differences between West and East are people, climate and disease. It will be seen that each of these, although widely different in meaning becomes closely associated when studied in terms of your comfort and health.

PEOPLE AND PRESENT CONDITIONS.

The range of activity of this Command makes contact with many races moving in a stream varying in its speed but seemingly without end, through countries which are entirely different. It is an unique situation. In India, in spite of many tongues, different religions and the distinction of castes, that great space on the globe still remains India. A.C.S.E.A. will bring you to Units in Malaya, Burma, Siam, the Netherlands East Indies, French Indo China, China (which includes Hong Kong) and Ceylon. Most of these countries are in process of fighting their way to the surface, having been submerged for nearly three years of occupation by the military and political forces of Japan, with all that implies. It is not to be wondered that different stages on the road to recovery are encountered. In Malaya and especially in Hong Kong, there is much active business in progress. In Burma, in and around Rangoon, the ravages of war have for the time rendered the people listless. It is not unnatural that devastation and physical impotence go often hand in hand. That is a part of the psychology of human nature. Lack of object in life, or, alternatively, a wish to survive and make use of the occasion, have encouraged the robber and the black market operator. The problem is largely that of demand and supply. Articles will be found expensive for many months and thefts more frequent than before the war. It will soon be appreciated that the Chinese, who are found in all these countries in relatively large numbers, and also the native inhabitants of each country are friendly and much appreciate a smile and a passing word, even if they do not gather its meaning. There is much to learn of the customs of a people in a foreign land, and there is much to be gained from reading books on the subject, visiting museums and places of interest. There is one striking feature about the local inhabitants we meet in A.C.S.E.A. and that is their personal cleanliness. Frequent bathing and changes of well-laundered garments of varied shapes and colours help to provide ample proof of their character and national pride.

CLIMATE

The common feature of the climates met with in A.C.S.E.A. is HUMIDITY. In some areas such as Hong Kong, there will be found a summer and a winter period. In Singapore Island and Malaya except in hilly districts, the climate varies little and there is no cold period such as we experience in the West. High humidity, which means that the air is heavily charged with water vapour, influences your health in certain ways. This will be mentioned under "Disease." It is here important to stress that hot and humid climates tend at first to create a feeling of fatigue. This is due in part to the climate, and in part to the fact that those newly arrived are curious to see as much of the surroundings as they can in as short a time as possible and thus exert themselves in a way which is their custom when on holiday in England. It should be a rule that the first month is passed without indulgence in heavy exertions such as strenuous tennis. This applies particularly to women and a little less perhaps to children, because children soon begin cheerily to adapt themselves to their new life. The advantage of a winter climate is that it creates new energy and allows of more healthy activities, thus building up a reserve of physical efficiency for the coming hot weather. When serving in humid climates with no definite seasonal change, it is well to spend a period of leave in the hills when this can be arranged. The fresh air and the cool nights are very valuable as a means of restoring energy.

DISEASE

A first principle in medical work should be the prevention of disease. The fact that this ideal can never be fully realised, is no excuse for failing to observe every precaution in the interests of health. The exercise of reasonable care takes only a few minutes of the day. The preservation of a child's health is highly important at the growing age. Life overseas calls for that little extra supervision which will quickly become a simple daily routine. As previously mentioned it is a character of the East that people, climate and disease are closely linked. There are many illnesses which are peculiar to tropical countries, some mild which provide a nuisance value only, some extremely serious carrying with them a high death rate especially among the native population. In order to avoid the more serious diseases, all personnel undergo special preparations for service overseas by inoculation and vaccination at their home establishments. It is of the greatest importance that, if possible, these are carried out before embarkation. If through some circumstance this preparation may have been missed or only partly completed, it is necessary to report the fact to the station medical officer at the earliest date after arrival. There are rare instances when a subject proclaims lack of faith in inoculations and may try to evade protection. In doing so a grave responsibility is shouldered, especially in respect of children who have not the power to decide. There have been

instances where parents have washed off the calf lymph after vaccination against small-pox, immediately after leaving the Medical Officer's room. This is most inadvisable because small-pox is endemic within the whole of A.C.S.E.A. "Endemic" means that a disease is always present in a community but is rarely seen as it is under a form of control. "Epidemic" means that either an endemic situation has got out of hand and spread rapidly, or a disease unfamiliar in the area has suddenly assumed serious proportions, inflicting itself upon a fresh and therefore susceptible population. An excellent example of this was the introduction of measles among the Western Canadian Indian population by the white settlers. The Indians experienced a very high death rate because the disease was new in their systems, while the white people, who had been so frequently infected for generations, suffered much less. This brings us to the term "passage" of organisms, because it can be shown that bacteria tend in the early stages to gain in strength from the infection of big numbers of humans. This recalls the Spanish influenza epidemics of 1918—1920 when over 56,000 people died in the London area alone. The reason this is mentioned is because small-pox, for example, attacking a non-vaccinated child will readily cause death, or at best severe markings on the skin particularly the face. Owing to careful protection against this disease by vaccination and because of effective measures taken by the Medical Authorities to broadcast notices of epidemic areas, the chance of contracting small-pox or serious tropical illness is very small. But vigilance is always necessary and it is the duty of the Medical Staff of A.C.S.E.A. to take every precaution in the interests of personnel by means of preventive medicine. It is felt certain that all who are joining the Command will co-operate in these endeavours.

Before leaving a Home Base to come overseas, all personnel including wives and children should have undergone the following Medical procedure.

1. VACCINATION AGAINST SMALL-POX

The results of vaccination may be:

- (a) Positive in which case the sequence of events is the formation of a hard bright red spot which rapidly becomes a blister. This in turn changes into a little pearly white swelling which dries up leaving a scab. When the scab falls off, the typical vaccination scar or mark is seen.

In some cases there may be fever with tenderness and swelling of the arm at the site of the scratch. In other cases the reaction is slight and the above sequence of events becomes less obvious.

- (b) No Reaction. This may be due to immunity, in which case parent or child is safe. It may also be due to loss

of power of the calf lymph. In either case in order to be sure, you should discuss the result with the Station Medical Officer who will probably recommend re-vaccination. Protection lasts at least two years.

2. T.A.B. INOCULATION.

This is an anti-typhoid inoculation which covers not only typhoid fever, but other fevers of the so-called typhoid group. Typhoid fever is very common among populations in the East. It is probable that 40% of the local inhabitants in many localities have suffered from one or other forms of the disease. This situation provides a further example of natural resistance to a disease which for generations has been common in an area. The inhabitants tend to survive, but newcomers if not properly protected experience a high death rate. You should have had two T.A.B. inoculations before embarkation. Protection lasts 12 to 18 months.

These preparations constitute the chief protective steps in your interests. There are other inoculations which are given under special circumstances but are not employed in routine practice. These are:

- (a) **Yellow Fever.** Yellow fever inoculation is given to those passing through, or starting from, an area where the disease is known to exist. It is carried by a Mosquito. Protection lasts four years.
- (b) **Cholera.** This inoculation is usually reserved for times of epidemics either in your area or in areas to which you may be going. The protection lasts only three months.
- (c) **Typhus Fever.** The disease must not be confused with Typhoid fever. They are entirely different, and inoculation against one exercises no favourable effect against the other. It is necessary to give three inoculations at weekly intervals. The protection is one year. A single dose then protects for a second year.
- (d) **Tetanus.** Anti-tetanus or lock-jaw inoculation was given to all personnel in the fighting forces during the war should they receive wounds infected by soil contaminated by animal manure. The organism inhabits the intestine of certain animals, particularly horses. Protection lasts one year.
- (e) **Plague.** The inoculation is very rarely given. Only when an epidemic area has been notified is it necessary to undergo this protection. The period of immunity is uncertain.

It will be observed that the number of protective measures provided by medical science is formidable, but many are resorted to only at times of grave danger.

It is now necessary to describe the far more simple and common conditions met with overseas. These will be mentioned in order of their most frequent appearance. It should be again stressed that early advice and treatment is of great importance and much discomfort can be prevented by careful observation and by an early appeal to your Medical Officer. These remarks apply even in a greater measure to your children. It is necessary to mention:

1. Prickly heat.
2. Ring worm of the body.
3. Ring worm (tinea) of feet and toes.
4. "Tummy troubles."
5. Ear troubles.
6. Malaria.
7. Effects of heat.
8. Snakes, scorpions and various insects.

1. **Prickly Heat.** This is a condition of the skin most commonly occurring in climates such as Singapore Island when the heat, day and night is not great, but the humidity is very high. The events leading to the condition are as follows. Exercise, even normal exercise as we understand it in England, causes sweating in excess of the work done. Sweating and therefore moist skin is present even when we are sitting still. The sweat glands are called upon to act in an abnormal manner. They become fatigued. Salt from the sweat lies upon the skin and causes irritation. Damp clothing and clothing made from rough materials tends to increase skin irritation. Irritation of any organ of the body tends to produce inflammation and inflammation opens the way to infection by organisms always present even in the cleanest skin. So there is produced a set of conditions which is not usually experienced in England. The result is that the body may become covered with innumerable itching red spots. The fore arms are frequently affected and also those places where the garments worn fit closely to the skin. The condition is not dangerous but may result in some loss of sleep causing tiredness and even what we call "nerves." Very rarely prickly heat may become septic and in this manner has been known to result in invaliding.

Prevention. If you or your child are specially desirous of taking rather violent exercise, it is important to make use of the shower bath as soon as possible after you have finished your game. It is a wise policy to have two baths a day and a shower bath, which is very common in this area, helps to remove the sweat and the salt on the surface of the skin. The use of a good soap is important and either Coal Tar or Carbolic soap is helpful. All soap should then be removed by the use of a faster shower jet. After the bath as much water as possible should be removed from the skin by sweeping the hands downwards against the skin.

This means that there will be less water to be removed with the towel. The skin should then be made completely dry without friction rubbing. After drying, the use in small quantity of a good dusting powder is advisable, especially along folds of skin in the region of the thighs.

- (b) Changes of clean and well-laundered clothing are most necessary. The ironing of clothing helps to prevent some of the organisms developing in the cloth which are responsible for ring-worm.
- (c) Rough materials are bad. Therefore the wearing of soft aertex type underclothes is important. Heavily starched linen next to the skin may result in soreness from rubbing by sharp edges and sometimes sepsis may come about.
- (d) When sleeping at night under your Mosquito curtain (which should be fitted round your bed at dusk) the thinnest of garments should be worn, as the space within your net tends to be hot and the air very still. Coverings that are not necessary cause perspiration which aggravates the prickly heat and results in itching of the skin and frequently loss of needful sleep. Although there is little proof of its real value, it is advisable to place a thin scarf or other suitable article of clothing about your waist, particularly if an electric fan is in operation. Also there may come a dawn chill which reaches you before you wake up.
- (e) It is strongly advised that after sea bathing a fresh water shower is taken. It is also important not to undertake sun-bathing except very cautiously until you are well accustomed to the climate.
- (f) There appears to be some evidence that a carefully developed sun-tan raises the resistance of the skin.

Treatment. If prickly heat develops to an extent sufficient to worry you, you should consult your Medical Officer who will provide you with some of the cooling and evaporating lotions which reduce the irritation. Actually the best way to over-come severe prickly heat is a visit to a cool atmosphere usually within the reach of most R.A.F. Stations. There the condition improves rapidly and is cured in four to five days. There still remains much difference of opinion as to the most suitable treatment. What appears valuable in some cases is not helpful in others.

2. RINGWORM AND FUNGUS DISEASE OF THE BODY.

This condition is readily passed on by means of infected towels or under linen. The commonest form of ring worm is the so-called dhobie (or washerwomen's) itch. The condition is also met with

in England and causes epidemics in schools. Dhobie itch appears at the inner angle of the groin as a sore area of skin which may spread rapidly. Another form of body ring worm appears sometimes on the chest and arms. The condition starts as a small area of redness and then proceeds to spread in a circle, at the same time becoming normal in the centre, so that a ring of inflammation develops.

Prevention. It is probable that the dhobie has been overblamed for producing ringworm. It is most likely that the particular organisms responsible for ring worm are present in the skin in a great number of people, but the right conditions for developing and causing inflammation are absent. In hot countries, however, where the skin especially under the arms and at the angle of the thighs is constantly moist, the conditions for growth and spread of the organisms are more favourable. Here, careful attention at the bath and the employment of a good dusting powder, of which many varieties are available, will greatly help to prevent this condition.

Treatment. Treatment is a matter for your Medical Officer.

3. RINGWORM OF THE FEET AND TOES. There are many variations of this condition generally classified as "Fungus disease." The condition is easily contracted in hot and humid climates. It is not serious but causes irritation, discomfort and may restrict your walking. The first signs are the presence of white, damp, unhealthy skin usually between the third and fourth, and fourth and little toes. This skin is easily rubbed off and tends to leave a raw surface underneath. In this skin, grow the organisms responsible for the condition.

Prevention. If possible, it is most important when bathing to have two towels, one for the body and a separate one for the feet, because the infection of ring worm between the toes may be transferred to the body by the towel. It is important to wear clean socks or stockings each day, especially with those subjects who experience damp feet in England. The feet should be carefully washed with special attention to drying between the toes and the use of dusting powder. The use of thin socks or stockings and the wearing of properly fitting sandals with toe caps allows air to reach the feet. Sandals can be worn on bare feet in the house and along open path ways.

Treatment. Consult your Medical Officer.

4. BOWEL INFECTIONS. There are numerous forms of "tummy trouble" to use a common expression. They vary from a mild upset such as is common everywhere, to the more serious conditions as found in the dysenteries. There is no cause for worry over the slight forms of bowel discomfort and diarrhoea unless persisting for several days. The dysenteries however, present quite a different picture.

(a) **Dysentery.** There are two forms.

- (i) **Bacillary.** This is a very acute condition with abdominal discomfort, serious diarrhoea and the passage of blood. It is quite evident that the patient is seriously ill and the Medical Officer should be called immediately.
 - (ii) **Amoebic.** In this condition the first indications are a persisting looseness of the bowel until the motions are seen to be tinged with blood and become mucous in character. There is continued discomfort and the bowels may act as many as ten to fifteen times in one day. It is evident that before this state has been reached the advice of the Medical Officer should be sought.
- (b) **Typhoid.** You should have been very well protected against this condition and only by special misfortune will you be likely to acquire typhoid. If such a circumstance should arise the protection you have received will prove of the greatest value during the course of the illness.
- (c) **Acute Enteritis, of infancy and early childhood.** This condition is common in the plains of India during the the hot weather and is frequently caused from milk contaminated by dust or flies, which emphasises the great importance of providing net covers weighted with beads over vessels containing liquids. It is met with in England in the summer months when it is described by the doctors as D. & V. (diarrhoea and vomiting). The condition lasts for a short time, is extremely acute and alarming, but, in the case of a previously healthy child, life is not seriously endangered. It is of course, essential to seek the advice of the Medical Officer immediately. If reasonable care in preparation of food is taken this condition should not occur.

There are some golden rules for care in preventing these illnesses which can be briefly stated:

- (i) **Servants.** Cooks and others handling food should be selected with care. It is not at present possible to have a full medical examination made of the kitchen staff, as this would take several days and is not practicable. A clean appearance and well-cared for hands are the best guides. It should be a rule to see that the cooks and others preparing food wash their hands thoroughly and scrub their nails before meal preparations. Many organisms can be detected under the finger nails by bacteriological methods. There should be sufficient changes of white clothes for cook and assistants.

- (ii) **Choice of food.** It is quite wrong to confine yourself to tinned rations for fear of contracting some disease. All that is called for is reasonable care. Fresh and cooked vegetables and fruits are essential for health unless an elaborate system of supplementary vitamins is introduced. In the first place properly cooked vegetables and foods are safe. In the second place fruits covered by skins which you peel off such as the banana are safe. Grapes are dangerous unless the greatest care is taken in washing them. You should not eat grapes from a bunch without this precaution. Be careful always with regard to salads especially those prepared by unknown hands, such as in a restaurant. They constitute a great danger which it is well to avoid. Dysentery may be contracted in this way. Salads of cucumber and tomato are safe if prepared under careful supervision. It is safer still however to make the preparation of these dishes a personal duty. Under all circumstances avoid lettuce. It is almost impossible to free lettuce and water cress from contamination. Remember that all vegetables in this part of the world are raised in highly polluted soils. They may be washed in water and made to look attractive, but the water itself is often taken from drains beside the road. Time spent in checking the preparations of food is never wasted.
- (iii) **Water and Milk.** For safety even the so called "pure waters" should be chlorinated. There are a number of ways of doing this, about which you should consult your medical officer. Boiling is a good method for purifying milk or water. The preparation of ice is of the greatest importance. Ice prepared from water contaminated by organisms is highly dangerous. Ice in drinks should be refused unless the source is known. The same holds good for ice cream. Tap water for drinking or for the preparation of ice or ice cream is to be avoided. Advice can be obtained from the Station Medical Officer. It is important at all time to make sure that the house staff are carrying out their duties properly and are not using tap or well water when your back is turned. Certified pasteurised milk kept on ice is safe, but for general purposes boiling is the correct procedure. All drinks should be covered to protect against flies.
- (iv) **Contamination by flies.** Flies in the East carry on their legs, and in their saliva, and excretions many very serious diseases of which dysentery and typhoid are two examples. It is of the greatest importance therefore to take every precaution against the fly menace. Flies breed

rapidly wherever food or tins which contained food are thrown carelessly about. It should be remembered that bazaars and villages provide a great source of fly breeding and that as your vegetables and fruits frequently come from bazaars they are likely already to have been covered by flies. It is most important to inspect the area around your house and make certain that no refuse is carelessly thrown away. All waste from the kitchen should be put into covered bins to await collection by the Sanitary Authority. If there should be failure in carrying out this duty, you should report the matter to the Station Medical Officer. The menace of the fly has been much reduced by modern principles of hygiene especially the use of a spray called D.D.T. Open drains and sinks should be washed down by a weak solution of cresol representing about a wine glass of cresol to a bucket of water.

5. EAR TROUBLE. Ear conditions are often a cause of sickness and take a long time to cure. The most common is a skin disease of the outer ear. The causes leading to a prevalence of this condition are similar to those experienced with other skin conditions in the East namely, heat and humidity. The narrow opening of the outer ear leading down to the drum, increases the likelihood of infection from the retention of moisture, sea water after bathing, and dust. It is likely, therefore, that there is a connection between these ear conditions and swimming.

Prevention. As swimming is so frequently indulged in, it is necessary to take the greatest precaution to dry the ears thoroughly by passing the end of a soft clean towel down the ear. A small towel should be kept especially for this purpose and the drying should be done immediately after the swim.

6. MALARIA. Malaria has been left far down the list although it is a very important disease. The reason is that such great care is now exercised by the Civil and Military Medical Authorities that the risk has become much reduced. Nevertheless, the risk will always remain to some extent in this Command. Malaria is carried by various types of mosquito so that destruction of the eggs and the larvae in ponds and ditches is undertaken as a work of first importance. The female transmits the disease. One feature helping to differentiate the dangerous Mosquito from those that are harmless is noticed in the manner they rest upon the skin. The dangerous Mosquito is poised at a sharp angle. the harmless rests parallel with the skin.

Prevention. There are a number of ways of preventing Malaria.

(a) **Mepacrin.** This is a yellow coloured substance usually provided in the form of tablets having a bitter taste. It

was found of the greatest value during the war. Its action when given daily is to suppress the disease. The small daily dose does not result in the complete destruction of the parasite should it get into the blood but it will prevent the parasites from becoming active and causing the attack of Malaria. Mepacrin should be taken each day on the recommendation of a Medical Officer. In time certain areas in this Command will be declared Malaria free, in which case it will be safe to stop taking mepacrin unless there is a reason for frequent journeys, some of which may pass through areas heavily infected. Suppression of malaria by drugs in the case of infants is not favoured by many workers in tropical medicine.* They recommend special care in the use of Mosquito Nets, the wearing of long clothes in the evening which cover the ankles and can be tied around the shoes, mosquito repellent helps and the spraying of houses with D.D.T. or Flit.

- (b) **Mosquito Nets.** It is most important that mosquito nets are properly employed. They should be put in place at dusk and not lifted until daylight. In areas heavily infested by mosquitoes, it is often wise to spray the inside of the net when in place, with flit. Care should be taken to see that there are no holes in the net through which mosquitoes can work their way. Sleeping under nets is at first oppressive, but this feeling soon disappears.
- (c) In the evening it is advisable to wear stockings and take precautions against mosquito bites by putting some insect repellent around the feet and ankles. Where suitable, mosquito boots are advised.
- (d) **D.D.T.** Houses are sprayed with D.D.T. at intervals so as to cause the destruction of flies and of mosquitoes. These preventive measures help considerably to reduce the chances of acquiring Malaria.

7. EFFECTS OF HEAT. In Air Command, South East Asia, the heat of the day, although very noticeable, does not compare in intensity with that experienced in the plains of India from June to September. It is wise, nevertheless, in order to prevent a feeling of tiredness, to proceed carefully at first. Women who have reached middle age may feel tired during an active day. Nothing could be better than an hour of relaxation with the feet raised. Sun bathing should be commenced with great caution otherwise severe sunburn causing pain and incapacity may result. Exposure of a large surface of the back, chest or limbs to the sun should be restricted to ten minutes on end until a healthy tan is

* The latest recommended dosage for children is, aged 6—8 yrs. $\frac{1}{4}$ Tablet, aged 9—12 yrs. $\frac{1}{2}$ Tablet, aged 13—16 yrs. $\frac{3}{4}$ Tablet, aged 17 yrs. and above 1 Tablet daily to be taken in the morning with water after Breakfast.

established. After that it is not wise to exceed half an hour as a general rule. A dull day must not be considered a safe day in this respect. Severe skin burn can occur on cloudy days. Sun glare may tire the eyes. Some are far more sensitive than others to the effects of sun glare. If headaches occur a wide brimmed light weight hat provides great comfort. Glare is to be regarded as slight in A.C.S.E.A. owing to the presence of abundant green foliage and grasses. Glare glasses are sometimes needed. Care should be taken in their selection. Many are expensive and of no value.

8. **SNAKES, SCORPIONS AND VARIOUS INSECTS.** It is so rare that bites from poisonous snakes occur in England that the existence of these reptiles becomes disregarded. In A.C.S.E.A. snakes abound. This does not mean that they are frequently met with in places of habitation where the grass is cut and the pathways are wide. They are to be found in the thickets near quiet ditches in places seldom frequented. A number are poisonous such as the cobra. In the event of a snake bite the skin at the fang punctures should be cut if possible $\frac{1}{4}$ inch deep, and the wound sucked. A tight bandage should be applied between the wound and the heart upon soft structures so that the progress of blood in the veins may be stopped. Medical aid should be sought quickly. It is important for a companion to kill the snake for identification. Natural instinct often makes us feel that certain creatures may be dangerous and they are avoided. Children may not have this instinct. Therefore it is important not to allow children to wander into the jungle or through thick high grasses especially in damp areas. A stab from a scorpion's tail results in a very painful wound. In the case of young children this might prove fatal. Bites from certain spiders and centipedes may cause painful conditions. Care in house cleanliness and a clear space of cut grass reduces these dangers to a minimum.

9. **PETS.** While the owning of pets is not forbidden except in certain dangerous areas which are carefully described, the keeping of dogs or of cats is not wise, especially with children in the family. Children become deeply attached to domestic animals and frequently carry them or pat them. The dangers here are those of rabies (hydrophobia), of septic skin conditions and of some forms of worm which inhabit the intestine of dogs. To be on the safe side it is well to refrain from acquiring pets.

It is hoped that these brief notes will prove of help in guarding against certain common complaints likely to be met with in this Command. It is easily possible with proper care to pass through a full tour without illness. It is well, however, to be warned of certain conditions which will be unfamiliar and to learn how they may be avoided. The Medical Staff at Sick Quarters will help in every way possible by explaining in detail any special precautions against conditions peculiar to the district, and in carrying out examinations and treatment.

